

**From:** Chu, Xiangyu  
**Sent time:** 03/13/2014 11:25:37 AM  
**To:** Williams, Cheryl B.  
**Subject:** RE: flint hills case analysis  
**Attachments:** Flint Hills Resources Penalty JustificationXY.docx

---

Hi here is the penalty memo please review and comment. Thanks

---

**From:** Williams, Cheryl B.  
**Sent:** Thursday, March 13, 2014 10:35 AM  
**To:** Chu, Xiangyu  
**Subject:** flint hills case analysis

**MEMORANDUM**

**SUBJECT:** Penalty Justification for RCRA Violations Alleged Against the Alaska Department of Transportation and Public Facilities –Flint Hills Resources Alaska, LLC (AKD000850701) for Purposes of Settlement

**FROM:** Xiangyu Chu, Compliance Officer

**Thru:** Scott Downey, Manager, Region 10 Air/RCRA Compliance Unit

**TO:** Andrew Boyd, Attorney, Region 10 Office of Regional Counsel

This memorandum is to provide a penalty justification for RCRA violations alleged against the Flint Hills Alaska – North Pole Refinery (FHR) in accordance with the RCRA Civil Penalty Policy (RCPP). The violations and justification for penalties associated with those violations are described below.

**SUMMARY OF TOTAL PROPOSED PENALTY**

#	Count	Potential for Harm	Extent of Deviation	Gravity	Adjustment Factors	Economic Benefit	Total
1	Failure to make a hazardous waste determination groundwater filters containing iron sulfide scale[40 C.F.R. § 262.11]	Major	Major	\$37,500		--	\$37,500
2	Storage of hazardous waste in containers without a permit [40 C.F.R. § 270.1(c)]	Moderate	Major	\$75,000 <sup>1</sup>		--	\$75,000
<b>Total</b>				\$112,500.00 <sup>2</sup>			<b>\$112,500.00</b>

<sup>1</sup> For Count 2, a multiple penalty was applied. The company violated the same requirement on two separate occasions. \$37,500 x 2 +\$75,000

<sup>2</sup> Pursuant to the memorandum from Grant Nakayama, dated December 29, 2008, the total applicable gravity-based penalty for all counts was rounded to the nearest unit of \$100.

## VIOLATIONS

### Count 1. Failure to make a hazardous waste determination

#### BACKGROUND:

40 C.F.R. § 262.11 requires that a person who generates a solid waste, as defined in 40 C.F.R. § 261.2, must determine if that waste is a hazardous waste. The generator may make this determination based on analytical testing or by applying process knowledge in light of the materials or process used. If the waste is determined to be a hazardous waste, the generator must follow the requirements pertaining to the management of that waste. FHR failed to make a hazardous waste determination for groundwater filters containing iron sulfide as follows.

#### Penalty Summary Table:

Count 1. Failure to make a hazardous waste determination for yellow highway paint A. Waste stored in containers B. Waste placed into the pit		
A. Gravity Based Penalty Potential for Harm: Major Extent of Deviation: Major Top of the Penalty Matrix Cell	\$37,500	Comment 1A
B. Multi-day Penalty none	--	Comment 1B
<b>Total Gravity Based Penalty</b>	\$37,500	
C. Adjustment Factors		Comment 1C
• Good Faith:	--	
• Willfulness/Negligence:	--	
• History of Noncompliance:	--	
• Other Unique Factors:	--	
<b>Total Base Penalty</b>	\$37,500	
D. Economic Benefit	--	Comment 1D
<b>Total Penalty</b>	<b>\$37,500</b>	

#### Comment 1A.

**Potential for Harm: Major.** In accordance with the RCPP, a major potential for harm means that “(1) the violation poses or may pose a substantial risk of exposure of humans or other environmental receptors to hazardous waste or constituents; and/or (2) the actions have or may have a substantial adverse effect on the statutory or regulatory purposes or procedures for implementing the RCRA program.” RCPP, p. 15.

Failure to make a hazardous waste determination increases the likelihood that hazardous waste will be improperly managed as non-hazardous waste. In this case, FHR failures to determine if the underground water filters were D003 and/or D001 hazardous waste. The lack of a positive hazardous waste determination resulted in the iron sulfide containing paste that was on the groundwater filters to self ignite as the paste dried out. The resulting fire was substantial enough that the local fire

department was called to assist the facility in extinguishing the fire. After the fire was extinguished the debris was left in the original roll off container and a second fire fueled by the same filters started a few days later.

Making a hazardous waste determination is a key step that is necessary to determine what requirements are applicable to the waste, and to ensure that the waste will be managed in a manner that corresponds to the environmental and human health risks that it presents. Respondent's failure to make a hazardous waste determination for the underground water filters caused a substantial potential for harm to human health and the environment and to the implementation of the RCRA program. The potential for harm is major and not moderate, because when Respondent failed to make a hazardous waste determination, it did not manage the hazardous waste in accordance with the significant level of risk of harm to human health and the environment that it posed. Two fires occurred because the waste had not been adequately characterized. Furthermore, this violation resulted in failure to comply with other regulations that would have protected human health and the environment. This violation had a substantial adverse effect on statutory purposes or procedure for RCRA program implementation.

**Extent of Deviation: Major.** In accordance with the RCPP, a major extent of deviation is when the violator deviates from requirements of the statute or regulation to such an extent that most (or important aspects) of the requirements are not met, resulting in substantial noncompliance. RCPP, p. 17. One of the fundamental requirements in the proper management of hazardous waste is identifying those solid wastes that are subject to hazardous waste management requirements. By failing to perform a HW determination at the point of generation on the underground water filters, FHS deviated from requirements of the RCRA regulations to such an extent that a fundamental aspect of the requirements was not met, resulting in substantial noncompliance.

**Selection of the exact penalty amount:** According to the RCPP, the major/major penalty cell has a penalty range of \$28,330 – 37,500. Given the seriousness of the violation and the size and sophistication of FHS, a penalty at the top of the matrix cell was selected: \$37,500.

#### Comment 1B.

**Multi-day Penalty:** According to the RCRA Civil Penalty Policy, multi-day penalties are assessed for days 2-180 for all violations designated as major potential for harm/major extent of deviation. However, making a HW determination is a one-time activity required at the point of generation, therefore a multi-day penalty for this violation is not warranted.

#### Comment 1C.

**Degree of Willfulness and or Negligence for Count 1B:** The RCPP allows for an upward adjustment to address willfulness and/or negligence. The factors that should be considered include: how much control the violator had over the events constituting the violation; whether the violator took reasonable precautions against the event constituting the violation; and whether the violator knew or should have known of the hazards associated with the conduct or violation of the legal requirement. There is evidence to support an upward adjustment due to this factor. A similar fire occurred in 2011 and a subsequent analysis determined that filters that contain a large amount of iron scale or sand at the point of generation may result in an increase of iron sulfides which are polyphoric and may spontaneously ignite and were therefore determined to be D003. The iron sulfide is D003 because it is readily capable of detonation or explosive decomposition at standard temperature and pressure. The Respondent knew the hazardous associated with the solid waste but failed to make a hazardous waste determination at generation point which resulted to two separate facilities fires. A 25% upward adjustment is appropriate

for this violation but since we are already seeking the statutory limit this adjustment is not included in the gravity based penalty.

**Other Adjustment Factors:** No other adjustment factors were applied to the penalty. At the time of the penalty calculation, EPA had no information to indicate that an adjustment to the penalty regarding good faith efforts to comply, history of noncompliance, ability to pay, or other unique factors would be appropriate.

Comment 1D.

**Economic Benefit:** In 2011 FHS determined that the filters that contained a large amount of iron scale or sand at the point of generation may result in an increase of iron sulfides which are polyphoric and may spontaneously ignite and were therefore determined to be D003. Therefore, the only associated cost would be the savings realized from delaying making the determination. Because the cost saving is expected to be less than \$200, no economic benefit was calculated for this count.

**Count 2. Operating with out a Storage Permit/Failure to comply with the conditions to operate without a Permit or Interim Status.**

**BACKGROUND:**

Section 3005 of RCRA prohibits the treatment, storage or disposal of hazardous waste without a permit or interim status, and the regulation at 40 C.F.R. § 270.1(c) requires a RCRA permit for the treatment, storage or disposal of any hazardous waste identified or listed in 40 C.F.R. Part 261. Generators of hazardous waste are allowed to accumulate hazardous waste on-site without a permit or interim status, provided that they comply with certain conditions set forth in 40 C.F.R. § 262.34. The condition found at 40 CFR 262.34(a)(4) requires a LQG to comply with the requirements for owner or operators in subparts C and D in 40 CFR Part 265. 40 CFR 265.31 requires that facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned or sudden or non-sudden release of hazardous waste or hazardous waste constituents into the air, soil, or surface water which could threaten human health or the environment.

Letter from facility dated July 3, 2013 documenting the two fires caused by groundwater filters containing iron sulfides. According to the first incident reports from the local fire department that the employees stated this has happened before, the filters for the plant water are thrown in the dumpster when they are done with them and they can self- ignite.

Respondent's 3007 response to question #5 discusses the facility's written contingency plan, training, Emergency Response Team and coordination with local fire department. Although these actions and plans are required for emergency response to a fire, explosion or release of hazardous waste they are not measures used to minimize the possibility of such event.

Page 4 of the 3007 response, first paragraph states that, "Since the June incident, all filters are conservatively being managed as hazardous waste with the D001 and D003 waste codes. These filters are placed in 55-gallon drums and ten gallons of water is added to each drum to ensure a moist environment is maintained inside the closed container. The labeled drum is sealed and stored in the 90-day accumulation area. The drums are sent to the Burlington Environmental Kent Washington Facility and then to Ross Incineration in Grafton, Ohio for final incineration.

Penalty Summary Table:

Count 2. Storage and treatment of hazardous waste without a permit or interim status – waste stored in containers		
A. Gravity Based Penalty Potential for Harm: Major Extent of Deviation: Major Middle of the Penalty Matrix Cell	\$37,500	Comment 2A
B. Multiple Penalty none	2	Comment 2B
<b>Total Gravity Based Penalty</b>	\$75,000	
C. Adjustment Factors		Comment 2C
• Good Faith:	--	
• Willfulness/Negligence:	--	
• History of Noncompliance:	--	
• Other Unique Factors:	--	
<b>Total Base Penalty</b>	\$75,000	
D. Economic Benefit	--	Comment 2D
<b>Total Penalty</b>	<b>\$75,000</b>	

Comment 2A.

**Potential for Harm: Major.** In accordance with the RCPP, a major potential for harm means that “(1) the violation poses or may pose a substantial risk of exposure of humans or other environmental receptors to hazardous waste or constituents; and/or (2) the actions have or may have a substantial adverse effect on the statutory or regulatory purposes or procedures for implementing the RCRA program.” RCPP, p. 15.

The potential for harm is major and not moderate because each time Respondent failure to comply with container management standards resulted fires at the facility thus not **minimizing** the potential for a fire. The fires were significant enough that the local fire department was called in to help extinguish the fires.

By failing to manage hazardous waste in a such a way as to minimizing the possibility of a fire prevent, and failing to accumulate hazardous waste without meeting the conditions for operating without a permit or interim status, Respondent failed to achieve the fundamental goal of RCRA, that is, to handle wastes in a safe and responsible manner. Therefore, Respondent’s failure to manage their hazardous waste to prevent the possibility of fires, and accumulation of such waste without a permit or interim status, have thus caused a substantial potential for harm to human health and the environment and to implementation of the RCRA program. Furthermore, due to the self-implementing nature of the RCRA regulatory program, the fact that Respondent’s action actually caused several significant facility fires caused substantial harm to the program and further supports classifying the potential for harm for this violation as major.

**Extent of Deviation: Major.** The extent of deviation is major and not moderate because FHR deviated from requirements of the RCRA regulations to such an extent that the important aspects of the requirements were not met, resulting in substantial noncompliance and therefore not minimizing the potential for two fires.

**Selection of the exact penalty amount:** According to the RCPP, the major/major penalty cell has a penalty range of \$28,330 – 37,500. Given the seriousness of the violation and the size and

sophistication of FHS, a penalty at the top of the matrix cell was selected: \$37,500. The penalty is selected because FHR failed to meet fundamental conditions of the RCRA program to minimize the possibility of two fires when there was facility knowledge in 2011 that these filters can self ignite.

Comment 2B.

**Multiple Penalty:** According to the RCRA Civil Penalty Policy, penalties for multiple violations also should be sought in litigation when company violated the same requirement on separate occasions not cognizable as multi-day violations. Respondent failed to operate the facility to minimized the possibility of a fire on two separate occasions. Therefore, EPA is seeking a gravity penalty of \$37,500 per fire and a total of \$75,000 for this count.

Comment 2C.

**Degree of Willfulness and or Negligence for Count 2:** The RCPP allows for an upward adjustment to address willfulness and/or negligence. The factors that should be considered include: how much control the violator had over the events constituting the violation; whether the violator took reasonable precautions against the event constituting the violation; and whether the violator knew or should have known of the hazards associated with the conduct or violation of the legal requirement. There is evidence to support an upward adjustment due to this factor. A similar fire occurred in 2011 and a subsequent analysis determined that filters that contain a large amount of iron scale or sand at the point of generation may result in an increase of iron sulfides which are polyphoric and may spontaneously ignite and were therefore determined to be D003. The iron sulfide is D003 because it is readily capable of detonation or explosive decomposition at standard temperature and pressure. The Respondent knew the hazardous associated with the solid waste but still failed to prevent and minimize the possibility of fires at the facility. A 25% upward adjustment is appropriate for this violation but since we are already seeking the statutory limit this adjustment is not included in the gravity based penalty.

**Adjustment Factors:** No adjustment factors were applied to the penalty. At the time of the penalty calculation, EPA had no information to indicate that an adjustment to the penalty regarding good faith efforts to comply, willfulness/negligence, history of noncompliance, ability to pay, or other unique factors would be appropriate.

Comment 2D.

**Economic Benefit:** The Agency considers the least expensive means of compliance when calculating economic benefit. The least expensive way for FHR minimize the possibility of a fire is to place the filters in the containers and add water to the container. The least expensive way to meet container management standards would be to use a marker to write the words "Hazardous Waste" on the containers, along with the accumulation start date. The cost of a marker is approximately \$5. It would have likely taken an Environmental Coordinator approximately half an hour to label, date, and close the containers. According to the 1997 Manual for Estimating Costs for the Economic Benefit of RCRA Noncompliance, the labor rate for an Environmental Coordinator was \$50/hour (or \$25/half an hour). Because the cost is expected to be less than \$200, no economic benefit was calculated for this count.